TWO NEW SPECIES OF *FAVARTIA* FROM THE WEST PACIFIC OCEAN (GASTROPODA: MURICIDAE)

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ABSTRACT

Two new species of muricids, Favartia (Murexiella) rosamiae *and* F. (M.) leonae *are described from the Philippines and Ryukyu Islands, and compared with related species.*

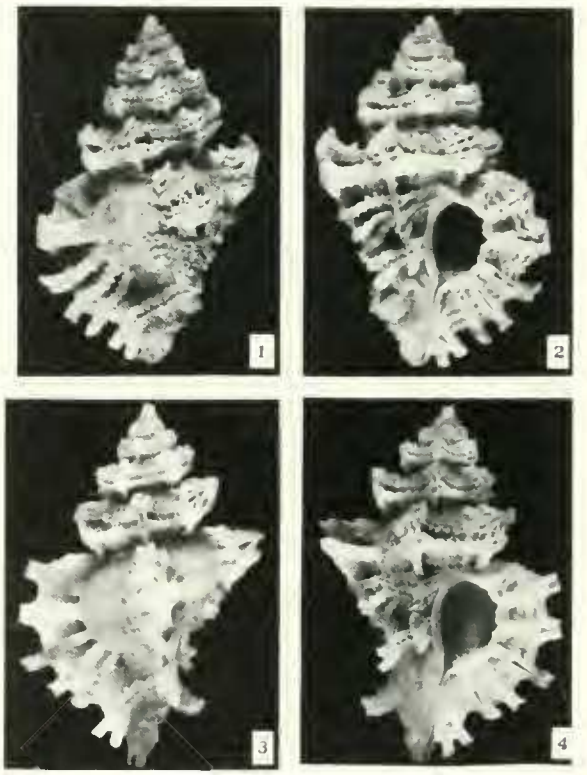
Through the courtesy of several shell collectors, we have recently obtained for the collection of the San Diego Natural History Museum, specimens of two undescribed species of muricid gastropods. One of the new species, *Favartia (Murexiella) rosamiae* has been confused with *F. cyclostoma* (Sowerby, 1841). The redescription of *F. cyclostoma* and selection of a lectotype was discussed by D'Attilio and Myers (1984).

Institutional abbreviations used in this paper are: AMNH = American Museum of Natural History, New York, New York, and SDNHM = San Diego Natural History Museum, San Diego, California.

MURICIDAE Rafinesque, 1815
MURICOPSINAE Radwin and D'Attilio, 1971
Genus *Favartia* Jousseaume, 1880
Subgenus *Murexiella*
Clench and Perez Farfante, 1945

Favartia (Murexiella) rosamiae
new species
Figs. 1 to 6

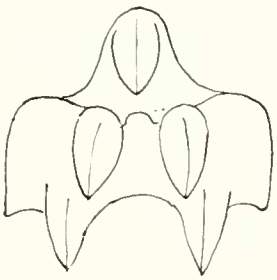
Shell moderately broad, fusiform; spire elongate; five to six postnuclear whorls; shoulder angulate on spire; suture impressed. Protoconch of holotype eroded; protoconch of paratype B with three and one-quarter conical transparent whorls. Aperture subovate; outer lip crenulate and fluted; inner lip moderately erect anteriorly. Anal sulcus weakly defined. Siphonal canal long, narrowly open, broad above, tapering terminally, recurved and tube-like. Two to four well-preserved former canal terminations on the siphonal fasciole. Four varices on body whorl, five on penultimate whorl; body whorl varices thick, beginning at suture above shoulder and descending anteriorly to the canal. Spiral sculpture consisting of six strong cords terminating in spines; one or two cords above the shoulder, the strongest cord and spine at the shoulder and three secondary cords



FIGS. 1 and 2. *Favartia (Murexiella) rosamiae* D'Attilio and Myers. Dorsal **(1)** and apertural **(2)** views of holotype. Dimensions 17.7 mm × 12.2 mm. SDNHM 80742.

FIGS. 3 and 4. *Favartia (Murexiella) rosamiae* D'Attilio and Myers. Dorsal **(3)** and apertural **(4)** views of paratype A. Dimensions 15 mm × 10.7 mm. SDNHM 85101.

FIG. 5. Camera lucida drawing of the protoconch of *F. (M.) rosamiae*, paratype **B**. SDNHM 82288. Greatly enlarged.



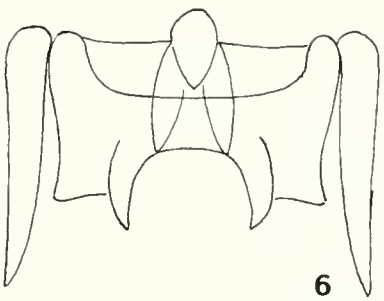


FIG. 6. Detail drawing of the radula of *F. (M.) rosamiae*. Greatly enlarged.

below. Two additional cords on the canal. Cords separated on the dorsal side by a strongly depressed or excavated area. Cords covered by blunt appressed scales; a portion of each scale bulges beyond the width of the cord lending the cord a toothed or serrated appearance on both anterior and posterior sides. Cords and spines on the outer lip connected by a flange and the spiny extension of the spiral cords terminate well beyond the flange. Intervarical areas on the body whorl broadest between the final varix and the preceeding one. The scabrous cords strong on the varices and obsolete on the final intervarical area. Cords and scales microscopically spirally grooved with the terminal portion of the scales convexly scalloped. The radula ribbon long and narrow with about 110 rows of teeth. The rachidian plate with five strongly projecting, stocky short cusps, the central cusp extending above the rachidian plate.

Color: Holotype – dull white with four narrow brown bands visible within the aperture; siphonal canal a pale-orange. Color variability noted as follows: creamy white to tan occasionally with broad brown or red bands exteriorly. The siphonal canal either white or tan, occasionally orange or deep coral-red.

Type Locality: Cebu, Bohol Straits, Philippine Islands, 75-100 meters depth. Paratypes from Balut Island, Mindanao, Philippine Islands; Cebu, Bohol Straits, Philippine Islands; Okinawa, Ryukyu Islands, Japan. Collected in 1984,.

Dimensions: Holotype 17.7 mm in length, width 12.2 mm from Cebu, Bohol Straits, Philippine Islands (SDNHM 80742); paratype A, 15 mm×10.7 mm from Okinawa, Ryukyu Islands, Japan (SDNHM 85101); paratype B. 8.8 mm× 6.2 mm from Cebu, Bohol Straits, Philippine Islands (SDNHM 82288). Seven paratypes from Cebu, Bohol Straits, Philippine Islands (SDNHM 80742) with the following measurements: 13.5 mm×10.4 mm; 13.8 mm×9.0 mm; 13.4 mm×9.7 mm; 12.1 mm×8.0 mm; 10.5 mm ×7.3 mm; 10.2 mm×7.3 mm; 9.5 mm×6.2 mm. Twelve paratypes from Okinawa, Japan (SDNHM 81639) with the following measurements: 15.7 mm×11.3 mm; 13.4 mm×9.8 mm; 12.1 mm×9.0 mm; 12.4 mm×8.5 mm; 11.1 mm ×9.6 mm; 12.1 mm×8.6 mm; 11.6 mm×7.7 mm; 11.3 mm×8.5 mm; 11.5 mm×7.1 mm; 11.5 mm×7.7 mm; 10.6 mm×8.5 mm; 9.8 mm×7.6 mm. Twelve paratypes from Balut Mindanao Island, Philippine Islands (SDNHM 84345) with the following measurements: 12.3 mm×8.4 mm; 12.7 mm×7.5 mm; 12.5 mm×8.3 mm; 11.8 mm ×8.2 mm; 12.3 mm×7.5 mm; 11.5 mm×8.3 mm; 11.5 mm×8.4 mm; 11.3 mm×8.0 mm; 10.7 mm ×7.6 mm; 10.8 mm×7.7 mm; 11.3 mm×7.5 mm; 11.3 mm×8.5 mm.

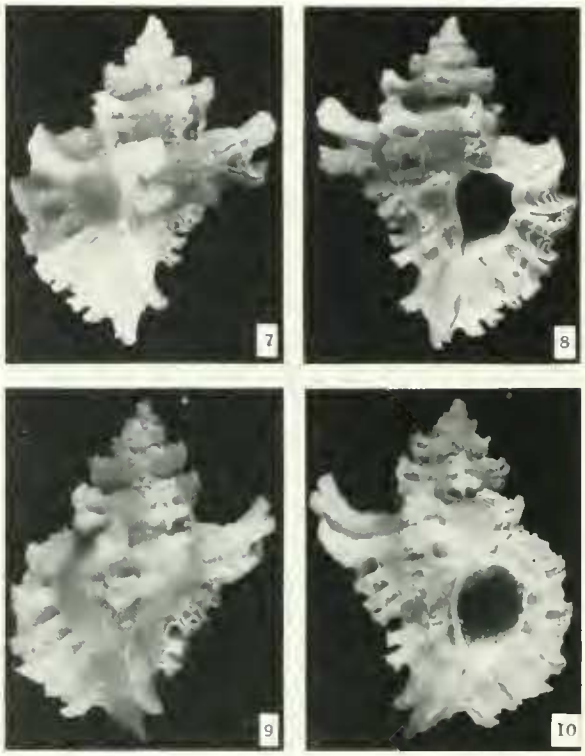
Two paratypes from Cebu, Bohol Straits, Philippine Islands are deposited in the American Museum of Natural History (AMNH 213556). We are depositing two paratypes each in the following institutions: two paratypes in the

Academy of Natural Sciences of Philadelphia, from Cebu, Bohol Straits, Philippine Islands, 14.3 mm×9.0 mm; 13.3 mm×8.6 mm; two paratypes in the U. S. National Museum, from Cebu, Bohol Straits, Philippine Islands 13.4 mm×7.4 mm; 10.7 mm×8.8 mm; two paratypes in the Los Angeles County Museum from Balut, Mindanao Island, Philippine Islands 12.7 mm×9.2 mm; 12.1 mm×8.1 mm; two paratypes in the British Museum (Natural History) from Balut, Mindanao Island, Philippine Islands 14.5 mm ×11.0 mm; 12.5 mm×9.2 mm.

Etymology: This species is named for Rose D'Attilio, wife of the senior author, who first introduced him to seashells by sending him a box of shells from Florida in 1938. The Italian "rosa mia", which means my Rose, is latinized into the genitive form ending.

Discussion: Comparison is made with *Favartia cirrosa* (Hinds, 1844), the shell of which is broader with a shorter spire and possesses numerous strong lirations within the aperture; the varices are sharply recurved and number six on the body whorl, eight on the penultimate whorl, and nine on the whorl preceding the penultimate whorl. This increase in the number of varices on the moderately short spire tends to obscure the suture. The spire is higher and better defined in *F. rosamiae*, and the varices on the body whorl number four or five. The protoconch of *F. cirrosa* consists of two and one-half whorls, both whorls being the same diameter, while the protoconch of *F. rosamiae* consists of three and one-quarter smooth conical transparent whorls. For further discussion of *F. cirrosa*, a rare, long poorly-known species, see D'Attilio (1981).

This new species has been confused with *F. cyclostoma* (Sowerby, 1841). The well-defined characters of *F. cyclostoma* have been treated by D'Attilio and Myers (1984). Based on the morphology of the syntypic material, *F. cyclostoma* has a broader, heavier shell, the lectotype of which measures 24 mm×17 mm.



FIGS. 7 and 8. *Favartia (Murexiella) leonae* D'Attilio and Myers. Dorsal **(7)** and apertural **(8)** views of holotype. Dimensions 14.2 mm×11.5 mm. SDNHM 81638.

FIGS. 9 and 10. *Favartia (Murexiella) leonae* D'Attilio and Myers. Dorsal **(9)** and apertural **(10)** views of paratype **H.** Dimensions 13.1 mm×10.6 mm. SDNHM 85109.

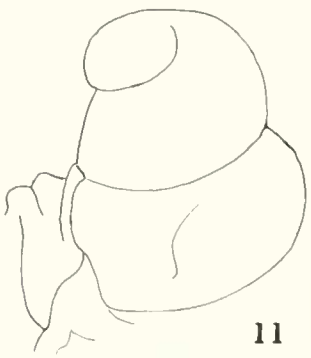


FIG. 11. Camera lucida drawing of the protoconch of *F. (M.) leonae* paratype **D.** SDNHM 85105. Greatly enlarged.

Favartia (Murexiella) leonae, *new species*

Figs. 7 to 11

Shell broadly fusiform, shoulder angulate, spire moderately high, suture impressed. Protoconch of holotype eroded; protoconch of paratype D with 2¼ dull white blunt, convex whorls; four to five postnuclear whorls. Aperture white, ovate; inner lip erect anteriorly. Anal sulcus directed to the left. Outer lip erect, crenulate, reflecting the exterior spiral sculpture. Siphonal canal broad above, narrowing and recurving distally, and weakly open. Siphonal fasciole with three scaly tubelike remnants of earlier canal terminations. Four varices on body whorl with

the intervarical areas unequal. Five varices on penultimate whorl. Two weak spiral cords on spire strongly developed only on the back slope of the varix. Five to seven spiral cords on body whorl, weakly defined between varices and strongly developed on receding portion of the varices. The first two to three cords developing into elongate spines on the varices except on the apertural varix where all cords are of equal size. On the final varix the moderately projecting cords connected by a continuous flange which abuts the penultimate whorl. Growth striae on the body whorl weakly developed. The leading side of the apertural flange with about four to seven well developed lamellae in the interspaces between the cords.

Color: Pale rose shell with spines a much lighter hue. Occasionally (holotype) with a broad band of deep coral red.

Type locality: Bolo Point, Okinawa, Ryukyu Islands, Japan from 55 meters depth. Paratypes from Okinawa, Ryukyu Islands, Japan, and from Bohol Straits, Philippine Islands.

Dimensions: Holotype 14.2 mm in length 11.5 mm in width from Okinawa, Japan, (SDNHM 81638); paratype A, 14.4 mm×10.2 mm from Okinawa, Japan (SDNHM 85102); paratype **B**, 10.7 mm×8.6 mm from Okinawa, Japan (AMNH 213555); paratype **C**, 12.5 mm×8.7 mm from Okinawa, Japan (SDNHM 85104); paratype **D**, 11.1 mm×7.8 mm from Bohol Straits, Philippine Islands, (SDNHM 85105); paratype **E**, 14.3 mm× 10.7 mm from Okinawa, Japan, (SDNHM 85106); paratype **F**, 14.2 mm×11.0 mm from Okinawa, Japan, (SDNHM 85107); paratype **G**, 14.0 mm× 9.8 mm from Okinawa, Japan, (SDNHM 85108); paratype **H**, 13.1 mm ×10.6 mm from Okinawa, Japan, (SDNHM 85109); paratype **I**, 12.5 mm× 9.2 mm (SDNHM 85110).

Etymology: Named for Leona Bellin, wife of Phillip Bellin, who first collected specimens of *Favartia (Murexiella) leonae* from Okinawa, Ryukyu Islands, Japan, used in this study.

Discussion: This species bears little comparison with any of its congeners, with the exception of an unnamed species which is more widespread and of a larger size, under study at the present time from the western Pacific. The lack of shoulder spines on the apertural varix is a consistent character in the specimens studied.

Acknowledgments

We wish to thank the following friends who contributed specimens for our study: Phillip Bellin of Okinawa, Japan; Robert Yin of La Jolla, California; Donald Pisor of San Diego, California; Edward Swoboda of Los Angeles, California; Robert Foster and Charles Glass of Santa Barbara, California. We are grateful to David K. Mulliner for the photography used in this paper and Dr. Hans Bertsch for his assistance with the Latin orthography. Dr. William K. Emerson (AMNH) kindly reviewed the manuscript.

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